therein adapted to mate in inter-fitting engagement with the connecting rail or lug; slidably placing the reinforcing insert upon the rail or lug, the reinforcing insert being sized and positioned relative to the beam in accordance with engineering calculations which determine the expected distribution of forces along the beam; and assembling a plurality of such beams into an architectural structure.

Fig. 9 shows an alternative configuration for practicing the reinforcing insert of the invention. In this embodiment, right and left beam sections 132, 134, respectively, are provided with elongated rails 136, 138 formed integrally with each beam half 132, 134, which are adapted to mate in inter-fitting engagement with corresponding grooves 137, 139 defined by reinforcing inserts 150. As in the embodiments shown in Figs 2-6, additional inserts 150 can be added on top of those shown in Fig. 9.

It is to be understood that the inventions disclosed herein are not limited to the precise constructions shown and described but that changes are contemplated which will readily fall within the spirit of the invention as shall be determined by the scope of the following claims.

CLAIMS

What is claimed is:

1. A structural beam member which can be assembled to form a frame for an architectural structure, comprising;

an extruded elongated load bearing element having a plurality of inner walls arranged to define a cavity;

an elongated reinforcement slat slidably connected to at least one of said plurality of inner walls;

at least one elongated projection fixedly connected to said at least one of said plurality of inner walls, said slat connected to said at least one of said plurality of inner walls by said at least one projection.

2. The member of claim 1, wherein the beam has a generally rectangular cross-section.

3. The member of claim 1, wherein the reinforcement slat is made of metal.

4. The member of claim 1, wherein the reinforcement slat defines at least one secondary projection for receiving a secondary reinforcement slat.

5. A structural member for making an architectural frame, said structural member comprising:

an elongated element having a plurality of outer walls;

at least one of said outer walls defining at least one anchoring member;

a reinforcement slat adapted to be connected to said anchoring member; said slat defining at least one female receptor for receipt of said at least one anchoring member.

6. The member of claim 5, wherein said element has a generally rectangular cross- section.

7. The member of claim 6, wherein the reinforcement slat is made of metal.

8. A support member which can be assembled to form a frame for an architectural structure comprising:

a generally rectangular, hollow, elongated beam;

a reinforcing insert having an elongate length coincident with or less than the elongate length of the beam;

at least one elongated connecting rail integrally attached to an interior wall of the beam;

an elongated channel defined by the reinforcing member adapted to engage in inter-fitting relation with said rail.

9. The member of claim 8 wherein said beam has a generally rectangular cross-section.

10. The member of claim 8 wherein the rail and channel form a dovetail-like connection in cross-section.

11. The member of Claim 10 wherein the reinforcing member is made of metal.

12. The member of Claim 11, wherein the beam is made of metal.

13. A method of reinforcing a support member which can be assembled to form a frame for an architectural structure, comprising:

providing an extruded hollow beam which has at least one projecting lug integrally connected thereto;

providing the reinforcing insert defining a recess adapted to mate in inter-fitting engagement with said lug;

connecting the insert to the beam by inter-fitting the lug within the recess, the insert being sized and positioned relative to the beam in accordance with engineering calculations which determine the expected distribution of forces along the beam.

14. The method of claim 13, further including the step of incorporating a plurality of such beams into an architectural structure.

15. The method of claim 13, wherein the reinforcing insert is made of metal.

16. An extruded bracing member comprising a rectangular strut having four walls defining an interior space, each wall meeting at a corner intersection, and a transverse web extending from one corner intersection to a diagonally opposite corner intersection.